

Peter Cunningham . INPUT
Review and Recommendations
Regarding the Strategic Plan
for Aggressive Growth

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for Aggressive Growth

Submitted to

Electronic Data Systems
Manufacturing and Distribution
Services Division

Prepared by

INPUT

1280 Villa Street
Mountain View, CA 94041
(415) 961-3300
Fax (415) 961-3966

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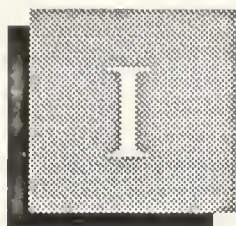


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Introduction



I. Introduction

A. Research Objectives

1. Review and critique the Strategic Plan, including validating its assumptions
2. Determine how EDS can achieve \$1 billion in revenues from non-GM sources by 1995
 - Determine current and potential EDS market share
 - Recommend specific service offerings
 - Develop an acquisition strategy and candidates to achieve growth goals

B. Research Scope

1. The discrete and process manufacturing, and wholesale distribution industries in the continental U.S. (17 two-digit SICs)
 - Excluding SICs allocated to other EDS SBUs
 - Including all functions of these companies, not just manufacturing
2. Revenue sources:
 - Increasing realized market sizes (expand services and targets)
 - Acquiring established vendors
 - Taking market share away from established vendors*
3. Vendor analyses:
 - Propensity to be acquired
 - Manufacturing/distribution market activities
 - Competitive activities, including alliances
 - Current and potential 1995 revenue
 - Potential for market share reduction

* Subsequent research effort proved these to be unproductive due to the multiple assumptions required of both the vendor's and EDS's strategies.

C. Research Methodology

1. Dallas meeting with Peter Cunningham to review project objectives and introduce INPUT to the Strategic Plan
2. INPUT team review of EDS plan and pro forma development services and strategies
 - Peter Cunningham—President
 - Denny White—Director, Custom Research
 - Denny Wayson—Vice President, General Manager
 - Doug Wilder—Director, Systems Integration
3. Detailed plan analysis using market and vendor research data bases and review with EDS staff
4. Top-down sizing of market opportunities, service offering opportunities, vendor/acquisition candidate growth potential (using INPUT manufacturing/distribution market specialists). Review with EDS staff.
5. Finalize strategy recommendations
6. Document findings
7. Present findings to EDS in Dallas

D. Definitions

1. *Information Technology (IT)* - ^{for Market} ~~The market for total end-user~~ expenditures, hardware, software, and services, both internal and external, for computer-related applications.
2. *Information Services (IS)* - The market for third-party expenditures ~~by end users~~ for computer-based applications. This includes computer/telecommunications-related services involving one or more of the following:
3. *Delivery Modes (Processing Services, Network Services, Software Products, Turnkey Systems, Systems Integration, Professional Services, Systems Operations)*
4. *Business Process Offering* - As users become more focused on their core business skills they will want to outsource activities which go beyond the scope of traditional IS to include the related business processes. For example, a user needing to upgrade human resource support systems for recruiting and evaluating engineering hires might opt for outsourcing the whole business requirement (e.g., provide X qualified engineering candidates over the next Y months). A third-party vendor could address this opportunity by combining HR software/systems with the acquisition of a world class engineering recruitment firm and providing the full service.
5. *CAGR* - Compound Annual Growth Rate

6. *EDI* - is the application-to-application exchange of intercompany business data in standard formats. It can involve automatic ordering by computers at a customer's location, automatic order confirmation and shipment information transmitted to the buyer from computers at the seller's location and automatic billing and payment as a result of prior actions.
7. *Outsourcing* - The transference of some or all of a company's IS center operations to an outside vendor. Outsourcing contracts are identified as systems operations or systems management contracts by the vendor. Systems operations contracts are further subdivided into processing services and professional services types. Processing services systems operations involves vendor-provided equipment. Professional services contracts utilized client-provided equipment. See Definitions Appendix for a more detailed explanation of the types of systems operations (systems management) contracts.

8. Industry (Vertical Market) Definitions

Discrete Manufacturing

SIC

- 23 Apparel
- 25 Furniture
- * 34 Fabricated Metal
- * 35 Machinery
- * 36 Electrical/Electronic
- * 37 Transportation Vehicles
- * 38 Instruments
- 39 Misc. Manufacturing

Process Manufacturing

SIC

- ** 20 Food
- ** 21 Tobacco
- 22 Textiles
- ** 24 Lumber
- 26 Paper
- * 30 Rubber and Plastics
- 32 Stone, Clay, Glass, Concrete
- * 33 Primary Metals

Distribution (Wholesale)

SIC

- * 50 Durable
- 51 Non-durable

* Targeted in EDS Strategic Plan

** Listed under discrete manufacturing in EDS Strategic Plan

8. Industry (Vertical Market) Definitions (Cont.)

- It is important to be aware of the operational and solution similarities between repetitive discrete manufacturing and batch process manufacturing (see below).
- This makes the classification of some 2-digit SICs arbitrary and provides opportunities for vendors to cross the line (witness ASK's move into the process sector).

Plant Operations Process and Discrete Manufacturing Functional Overlay

Discrete			Process	
Job Shop	Flexible	Repetitive	Batch	Continuous Flow

[Semiconductors]

[Food and Pharmaceuticals]

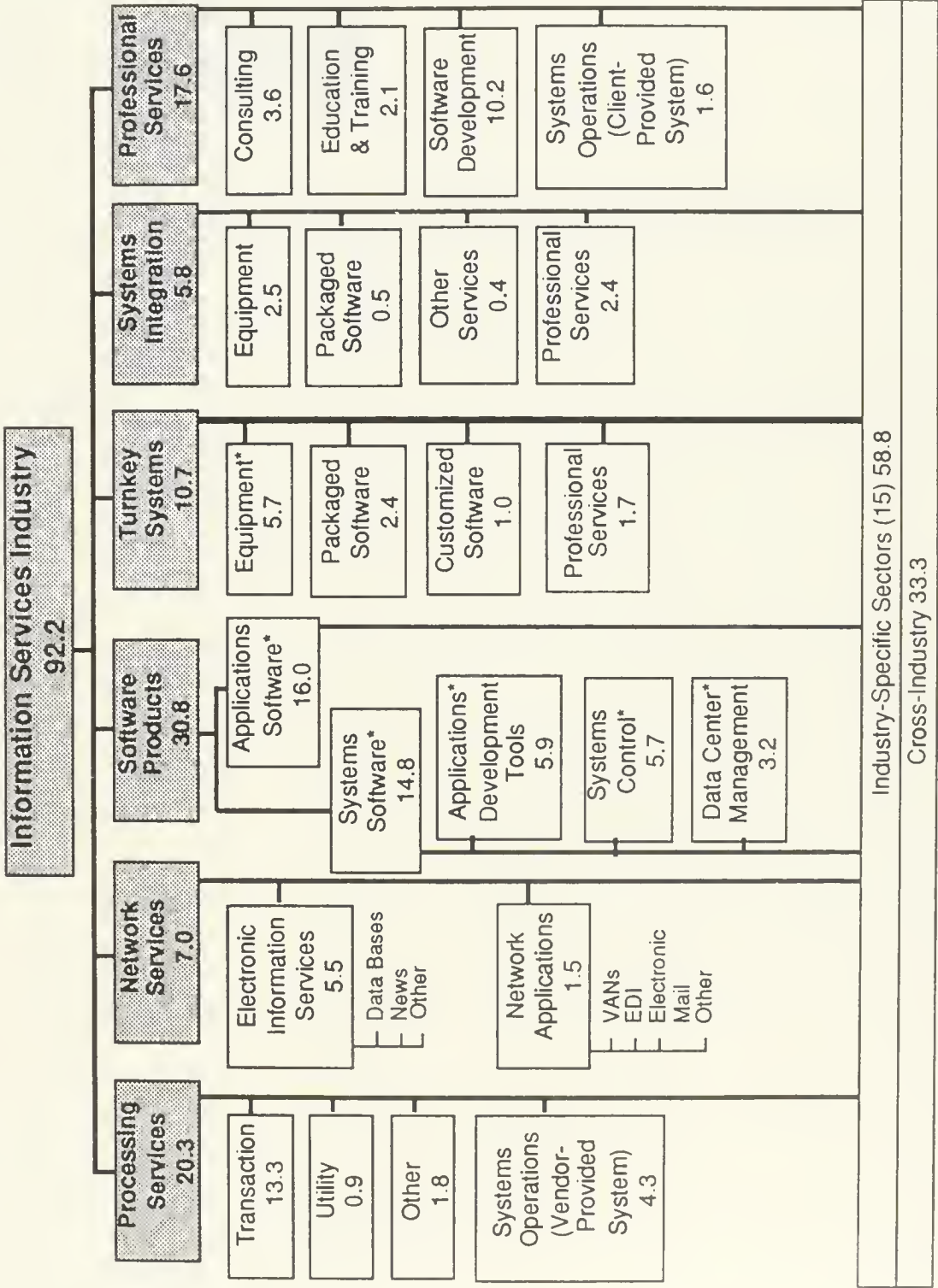
[Pulp and Paper]

9. Size of Firm

	Large (\$)	Medium (\$)	Small (\$)
Discrete	>1 Billion	300 M - 1 B	<300 M
Process	>1 Billion	300 M - 1 B	<300 M
Distribution	>500 Million	100 - 500 M	< 100 M

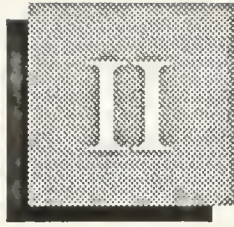
TOTAL IT EXPENSES
IS BUDGET
INF. SVCS MKT.

Information Services Industry Structure—1989
(\$ Billions)



*Broken out by Workstation/PC, Minicomputer, and Mainframe segments
Note: totals may not add due to rounding.

Source: INPUT



Strategic Plan Critique



II. Strategic Plan Critique

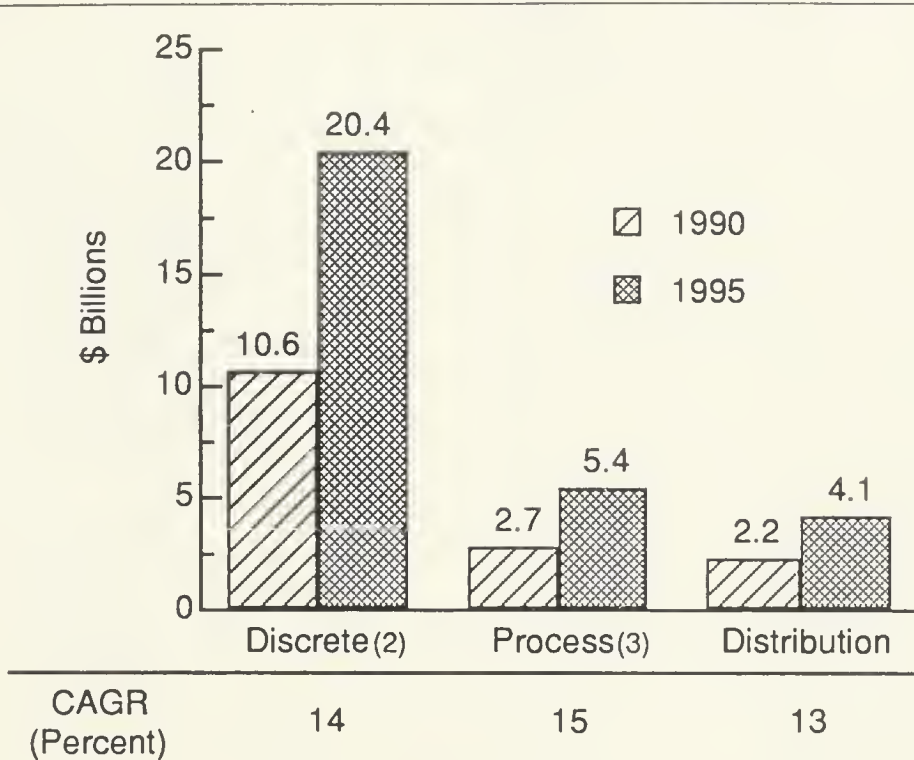
A. Statistical Assumptions and use of INPUT Data

1. User IT expenditure estimates are too conservative (use 3% to 4% of sales versus 1.2%).
2. INPUT data was accurately used, but...
3. INPUT feels it is more meaningful to focus on “outside available user spending” as the measure of the IS market, as opposed to “total IT expenditures.”

B. Qualitative Issues

1. There is no specific plan to get from \$65 to \$300 million—not even a forecast of the 1995 value of current core business.
2. Strengths/weaknesses and threats/opportunities appear frank and objective.
- * 3. The need to strengthen sales and marketing appears understated.
4. The burden of rapid growth on the supporting (overhead) infrastructure and management talent isn't mentioned.
5. Focus on old/traditional service offerings as well as new/innovative ones...don't ignore EDS's heritage.

C. Market Potentials—Sufficient for Growth Goals?



Forecast: Sum of three markets = \$15.5 billion in 1990, and \$29.9 billion in 1995 (CAGR=14%)

Assumption: No vendor can realistically expect to capture more than 20% of a large multifaceted IS market (including acquisitions)

Conclusion:

1. \$300 million strategic plan goal is easily supported
2. \$1 billion new goal is theoretically supported
3. The challenge is realistic

- Notes:
1. The three vertical market sizes include only those SICs allocated to the M/D Division
 2. Excludes GM, Ford and Chrysler (15%) and printing and publishing (14% of the discrete market)
 3. Includes food, tobacco, and beverages

D. Can Targeted SICs Support Revenue Goals?

	Percent of Industry Revenue	IS Market Size 1990	IS Market Size 1995	CAGR (Percent)
I. Discrete				
A. Targeted				
• Electrical/electronics	10	1.1	2.0	
• Transportation (1)	6	.6	1.2 (2)	
• Machinery(3)	13	1.4	2.7 (2)	
• Fabricated materials	27	2.9	5.6	
• Instruments	7	.8	1.4 (2)	
• Targeted divisions of Aerospace Corps	2	.2	.4	
S/T	<u>65</u>	<u>7.0</u>	<u>13.3</u>	
B. Not targeted				
• Aerospace/defense	21	2.2	4.3	
• Apparel	8	.8	1.6	
• Furniture	6	.6	1.2	
S/T	<u>35</u>	<u>3.6</u>	<u>7.1</u>	
Total discrete	100	10.6	20.4	14
II. Process				
A. Targeted				
• Rubber and plastics	16	.4	.9	
• Primary metals	8	.2	.4	
S/T	<u>24</u>	<u>.6</u>	<u>1.3</u>	
B. Not targeted				
• Food and tobacco	48	1.4	2.6	
• Textiles	8	.2	.4	
• Paper and lumber	16	.4	.9	
• Cement/glass	4	.1	.2	
S/T	<u>76</u>	<u>2.1</u>	<u>4.1</u>	
Total process	100	2.7	5.4	15
III. Distribution				
Targeted	60	1.3	2.5	
Not targeted	40	.9	1.6	
Total distribution	100	2.2	4.1	13

(1) Excl. GM, Ford, Chrysler, Aerospace

(2) Benefactors of aerospace decline

(3) M/O Division market share is $65/1400 = 4.6\%$

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MODES	12.	8.4
SIC	13.3.	N. 7.1

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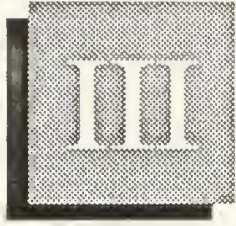
D. Can Targeted SICs Support Revenue Goals? (Cont.)

1995 Market Size (\$B)

	<u>Targeted</u>	<u>Not Targeted</u>	<u>Total</u>
Discrete	13.3	7.1	20.4
Process	1.3	4.1	5.4
Distribution	<u>2.5</u>	<u>1.6</u>	<u>4.1</u>
	17.1	12.8	29.9
% of total	57%	43%	100%

Conclusion:

1. 20% (maximum penetration) X \$17.1 billion = \$3.4 billion, supports \$1.0 billion growth goal, but this assumes EDS becomes active in all market areas (segments, delivery modes, etc.)
2. This is not realistic—can't "be all things to all people"
3. Therefore more SICs should be targeted



Revenue Growth Sources and Options



III. Revenue Growth Sources and Options

A. Revenue/Growth Options Overview

1. Expand target market segments (more SICs)
2. Speed up the current \$300 million plan
3. Expand delivery modes (beyond SI, SO, professional services)
4. Broaden targets to include middle-sized firms
5. Expand business functions served—target functional ("cross-industry") applications
6. Introduce business process offerings (combining IS with business process performance)
7. Acquire established vendors
8. Take market share away from established vendors—
DON'T COUNT ON IT!

B. Expand Target Market Segments (More SICs)

1. Add food and tobacco SIC to targeted list
 - Fast growing relative to other SICs
 - IS is critical function (e.g. EDI)
 - Adds \$2.6 billion to 1995 market potential
2. Add non-durable goods distribution SIC target
 - Logical fit with food and tobacco SIC and EDI
 - Adds \$1.6 billion to 1995 market potential
3. INPUT agrees with EDS's decision to avoid aerospace primes
 - Highly centralized IS
 - Committed to own data centers and IT control
 - But could offer interesting acquisition opportunities (see chapter III)

C. Speed Up Portions of the Current Plan

1. Timing is critical on the following planning and implementation windows
 - Acquisitions (some pickings are slim)
 - Cultivating consulting firm relationships - Buy PART.
 - National account concept as precursor to selling functional services and business process offerings
 - Software implementation and service strategy

Industries	Current EDS Modes		Other Modes		Total (\$ B)
	1995 Market (\$ B)	Market Percent	1995 Market (\$ B)	Market Percent	
Discrete	12.0	59	8.4	41	20.4
Process	2.8	52	2.6	48	5.4
Distribution	1.2	30	2.9	70	4.1
Total	16.0	54	13.9	46	29.9

D. Expand Delivery Modes

Conclusions:

1. Approximately half of the market is not being addressed by current EDS delivery modes.
2. Significant penetration of the distribution market will require new delivery mode capabilities (especially turnkey systems).
3. INPUT recommends that EDS selectively expand into application software, network services (EDI), and turnkey systems as new delivery modes.

Allocated Market by Delivery Mode Discrete Manufacturing

	1990		1995	
	Delivery Mode Percent of Market	Available Market \$ Billions	Delivery Mode Percent of Market	Available Market \$ Billions
A. Current EDS delivery mode participation includes:	53	5.6	59	12.0
1. Systems operations	5	.5	9	1.8
2. Systems integration	10	1.1	13	2.7
3. Professional services:	38	4.0	37	7.5
• Consulting	9	1.0	9	1.8
• Education and training	5	.5	4	.8
• Software development	24	2.5	24	4.9
B. Other available delivery modes	47	5.0	41	8.4
Includes				
1. Transaction processing services	7	.7	4	.8
2. Network/electronic information services	1	.1	3	.6
3. Application software products	17	1.8	16	3.3
4. Turnkey systems	22	2.4	18	3.7
Total	100	10.6	100	20.4

Allocated Market by Delivery Mode Process Manufacturing*

	1990		1995	
	Delivery Mode Percent of Market	Available Market \$ Billions	Delivery Mode Percent of Market	Available Market \$ Billions
A. Current EDS delivery mode participation includes:	47	1.3	52	2.8
1. Systems operations	10	.3	13	.7
2. Systems integration	3	.01	5	.3
3. Professional services:	34	.9	34	1.8
Consulting	6	.2	6	.3
Education and training	3	.1	3	.2
Software development	25	.7	25	1.3
B. Other available delivery modes	53	1.4	48	2.6
1. Transaction processing services	8	.2	5	.3
2. Network/electronic information services	12	.3	13	.7
3. Application software products	9	.2	8	.4
4. Turnkey systems	24	.7	22	1.2
Total	100	2.7	100	5.4

*Note that the M/D Division currently has no penetration of this market.

Allocated Market by Delivery Mode Wholesale Distribution*

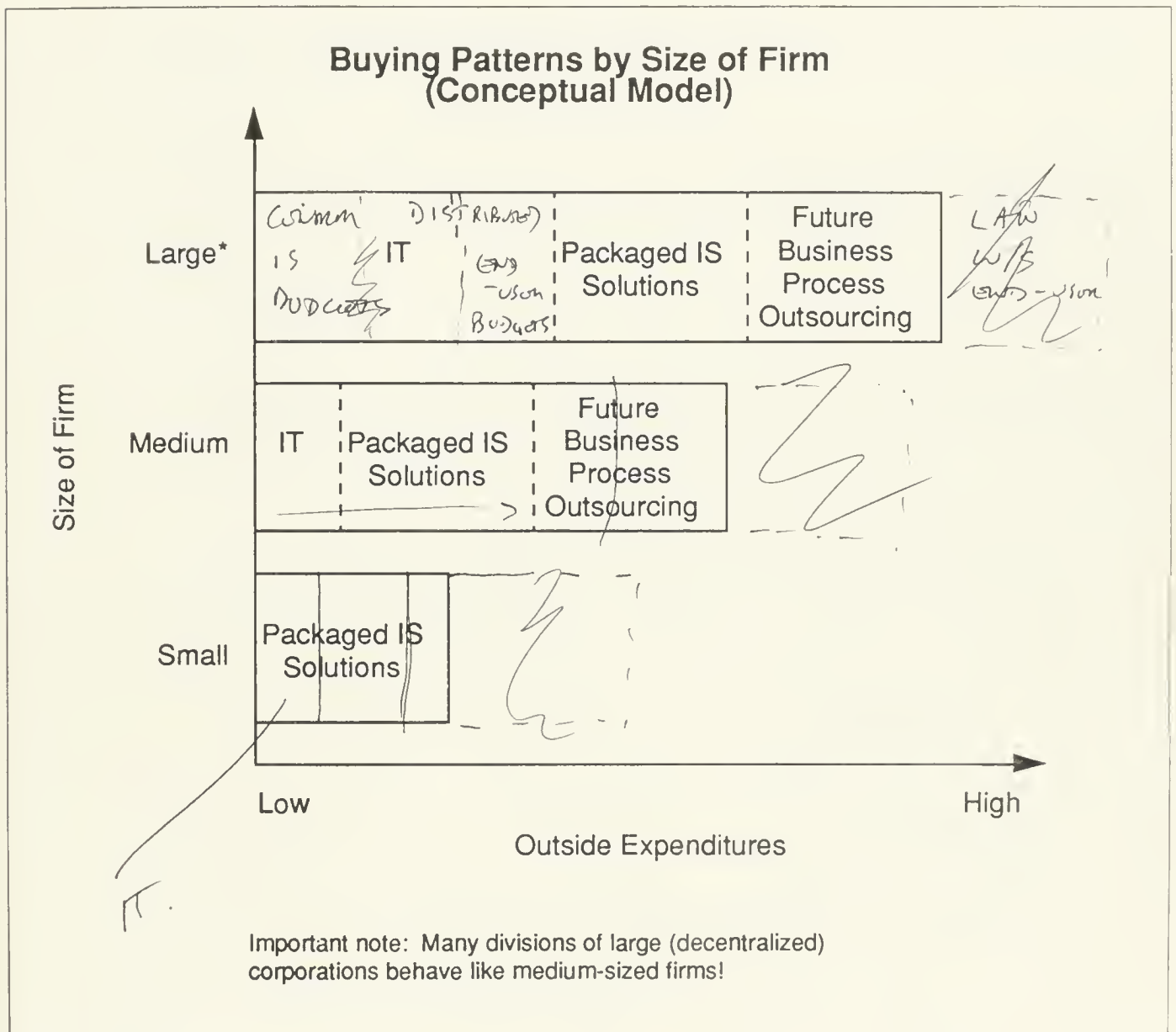
	1990		1995	
	Delivery Mode Percent of Market	Available Market \$ Billions	Delivery Mode Percent of Market	Available Market \$ Billions
A. Current EDS delivery mode participation includes:	29	.7	30	1.2
1. Systems operations	4	.1	6	.2
2. Systems integration	8	.2	8	.3
3. Professional services:	17	.4	16	.7
• Consulting	3	.1	3	.1
• Education and training	2	.1	2	.1
• Software development	12	.2	11	.5
B. Other available delivery modes	71	1.5	70	2.9
1. Transaction processing services	14	.3	11	.5
2. Network/electronic information services	11	.2	16	.7
3. Application software products	24	.5	25	1.0
4. Turnkey systems	22	.5	18	.7
Total	100	2.2	100	4.1

*Note that the M/D Division currently has no penetration of this market.

E. Broaden Targets to Include Medium-Sized Firms

1. Medium-size firm outside expenditures are included in INPUT's forecasts
2. Most receptive (and profitable) market for:
 - Packaged applications (turnkey solutions)
 - Outsourcing IT functions
 - Outsourcing business processes
3. Reasons why—they lack IT economy of scale to justify:
 - Internally developed solutions, e.g., network integration and management, distributed systems, CIM
 - In-house customization of software packages
 - Leading-edge development tools and methodologies (e.g., CASE)
4. Medium-size firms are ideal candidates for capital-intensive, high-risk applications

E. Broaden Targets to Include Medium-Sized Firms (Cont)



F. Expand Customer Business Functions Served

- 1. Target deeper penetration of fewer accounts (versus shallow penetration of more accounts).
- 2. Offer a full range of application services and/or business process offerings aimed at major customer functions (see below).
- 3. Note that:
 - Specific services may vary in content and design across the three major vertical markets.
 - Many of these functional services would benefit other EDS divisions which may help justify and fund the investment required.

Two Approaches to Serving Functional Markets

Customer Function	1995 Functional IS Market	1995 Business Process Offering Market
Sales & Marketing	Example: telemar- keting support software	Example: Providing a telemarketing service
Finance	Closest measure is INPUT's "Cross- Industry Services" Discrete: \$2.4 billion Process: \$0.8 billion Distribution: \$0.7 billion Total: \$3.9 billion <i>For all fun.</i>	Enormous by anyone's guess: • Wave of the future • Market needs to be developed by credible vendors Total \$: Unknown large number
Human Resources		
Engineering		
Production		
Distribution		
Information Systems		
<i>EXECUTIVE</i>		

F. Expand Customer Business Functions Served (Cont.)

4. Detail on functional application ("cross-industry" services) revenue opportunity:

Functional Area	Application	Area 1995 EDS Revenue Potential (\$ Millions)*
Sales & Marketing	1. Planning and analysis 2. Decision support	40
Finance	1. General accounting - Generic - Customized - Corp. headquarters large cap. 2. Credit union processing	35 50
Human Resources	1. Human resources management 2. Environmental monitoring and reporting	15
Engineering	1. 3D-CAD 2. Finite client analysis	25
Production	1. Computer-based training	1
Distribution	1. Computer-based training 2. EDI	50
Enterprise-wide	1. Image processing/discount management 2. EIS (executive information systems) 3. E-mail 4. Voice processing 5. Integrated office systems 6. Project management 7. Network management	500
Total	18 Applications	716

*Top down judgement

G. Business Process Offerings

	1995 EDS Revenue Potential* (\$ Millions)
1. Sales and marketing function:	
• Marketing services/economic data bases (audience measurement/grocery purchasing data analysis) for consumer goods firms and manufacturers	40
• Turnkey product marketing service (telemarketing, financing, billing, collection) for catalogues and manufacturers who just want to manufacture	100
• Customer service—telephone support, diagnose problems, dispatch repairs, maintain spares, preventive maintenance	100
• Coupon processing for retail food stores	20
S/T	<hr/> 260
2. Finance/administrative function:	
• Product warranty and liability management service—handle all federal and state government requirements (image processing application); tie to customer service offering above?	40
• Environmental monitoring and reporting service—interface with federal and state agencies	30
S/T	<hr/> 70

* Top down judgement

G. Business Process Offerings (Cont.)

	1995 EDS Revenue Potential* (\$ Millions)
3. Human resources function:	
• Computer end-user support service—education, hotline support, acquire/manage/maintain PCs (leverage internal EDS resources?)	150
• Group insurance claims processing and administration (sold to TPAs and self-insured corps)	150
S/T	<hr/> 300
4. Engineering function:	
• Turnkey generic mechanical design service for medium-sized manufacturers (using CAD/CAM)	50
• Engineering publications/document management services (imaging and RDBMS)	50
• CALS (C4) service for aerospace and other manufacturers with many sales	20
S/T	<hr/> 120
5. Production function:	
• Process control systems	200
• Manufacturing modernization service—turnkey upgrade package for medium-sized managers with distributed plants (could lead to SO leverage of EDS network)	300
S/T	<hr/> 500

* Top down judgement

G. Business Process Offerings (Cont.)

	1995 EDS Revenue Potential* (\$ Millions)
6. Distribution function:	
• Distribution services—operate highly automated warehousing, shipping and fleet management services	30
7. Enterprise-wide offerings:	
• Data center and network control design and installation (leverage EDS resources)	30
ST	<hr/> 60
Total business process offerings	<hr/> 1,310

Note: Implementing business process offerings may require the acquisition of both IS firms *and* non-IS firms with the required business process expertise.

* Top down judgement

H. Acquire Established Vendors

1. The primary mechanism for implementing previously described growth options
2. Alliances/partnerships:
 - Offer limited control over destiny
 - Sometimes (often) nothing happens
 - Uncertainty frustrates planning
3. Minority investments
 - Best way to exert influence on a partner
 - Especially if board position is gained
 - Pursue smaller alliance partners and acquisition targets who don't want to be acquired but would sell minority position
4. Acquisitions

Pro:

- Provide total control
- Deliver immediate revenue gains
- Connect EDS name with world class vendor
- Provide a customer base for other EDS services
- Keeps EDS in the news
- Is a vehicle for hiring/attracting people who might not join EDS directly
- Provide needed sales and marketing muscle and expertise

Con:

- Requires heavy investment
- Needs to be managed/integrated with EDS organization
- Culture impacts...

Rationale for Acquisition Candidate Selection:

- Companies add application functionality and delivery mode capability, with primary emphasis on discrete manufacturing and wholesale distribution, initially
- Quality reputations
- Realistic “market” valuations for public companies *
- Application development tool technology specific to manufacturing
- Integrated applications across functional areas
- Shop floor application software for some of the allocated process industry SIC codes
- Support of “popular” computer platforms within the manufacturing and wholesale distribution industries
- Potentially acquirable companies that could expand revenue growth with a stronger professional services/SI capability
- Companies with strong market share in particular application areas
- Can enhance sales support efforts in targeted markets
- Facilitates move into mid-sized markets

Acquisition Candidates

Company	Application Function	Delivery Mode	Discrete	Process	Whole-sale Dist.	"Tight" Alliances*	Propensity to be Acquired	Image	Est. 1990 Revenue (\$ M)	Est. 1995 Revenue Potential (\$ M)
1. ASK Computer Systems, DEC, HP, IBM, Sun	MRPII + shop floor, finance, marketing, customer support	Software application	X	X		Software dev. — HP, DEC, Sun, Ingres (RDMS)	Medium to high	Good	200	350
2. Boeing (electronic design/document CAD/CAE)	MRPII, project planning, blueprint distr., engineering production	Systems integration, Turnkey	X			Internal DEC SI contract	Low to medium	Good	100	200
3. Sterling Software (Application System Software)	EDI (electronic data interchange)	Network service application software							28	105
4. ITP Systems/Mainstream Software Corp. (sub. of ITP Boston)	Plant floor control/data exchange for real-time transaction-based systems	Application development tools for CIM, SI	X	X			Low to Medium	Good	20	50
5. NRM-Steelatic, Inc. ATM Division	MRPII to shop floor interchange (plastics, rubber)	Turnkey		X			-	-	2	5
6. Process Corp.	Shop floor control (steel, glass, plastics, cement)	Application software		X		IBM reseller	-	-	3	9

* Close, solid working and/or financial relationships

Acquisition Candidates

Company	Application Function	Delivery Mode	Discrete	Process	Whole-sale Dist.	"Tight" Alliances*	Propensity to be Acquired	Image	Est. 1990 Revenue (\$ M)	Est. 1995 Revenue Potential (\$ M)
7. Software 2000, Tesseract, Cyborg Systems or Integral Systems	Human resources	Application systems	X	X	X	Cincom IBM, SAA Partner	? Available ? ?	Fair to good	22	40
8. Pansophic Computer Systems	MRPII Distribution	Application software	X		X	CASE-Nastec Cadre OS/2 SAA support		Fair	17	30
9. McDonnell Douglas System Integration	CAD/CAM, Insurance claims, processing for TPAs	Turnkey application software	X		X	-	Possible	Good	13	23
10. Paychex	Finance	Processing services	X	X	X	-	Fair	Good	25	44
11. The MacNeal-Schwendler Corp.	CAE, FEA engineering	Application software	X			Hardware reference selling IBM, DEC, Sun, Silicon Graphics and IBM/CADAM interface	Fair to good	Good	190	375
12. Servio Corporation	Object-oriented programming tools	System software	X	X	X	-	Fair to good	Good	300	600
									100	195
									50	100
									6	30

* Close, solid working and/or financial relationships

Acquisition Candidates

Company	Application Function	Delivery Mode	Discrete	Process	Whole-sale Dist.	"Tight" Alliances*	Propensity to be Acquired	Image	Est. 1990 Revenue (\$ M)	Est. 1995 Revenue Potential (\$ M)
13. Intergraph	CAD/CAE/CAM	Turnkey Application software	X			Sansum-Clipper chip set	Fair to good	Fair to good	925	1000
14. Imrex AS/400	Human resources, wholesale distribution (food, electrical, auto, pharmaceutical)	Professional services, application software	X	X	X		Fair to good	Fair to good	15	30
15. System Software Associates	Business planning/wholesale distribution	Application software, turnkey systems	X	X	X	-	Fair	Good	125	305
16. MCBA, Inc.	Business planning/distribution		X	X		-	Fair to good	Fair to good	10	20
17. Logisticon	Wholesale distribution	Turnkey systems	X		X	-	Fair to good	Good	9	18
18. Marcam	MRPII + shop floor control	Application software		X		IBM—joint marketing	Fair to good	Good	15	30
19. A.T. Kearney	Consulting—manufacturing	Professional services	X	X	X		Unknown	Good	100	200

* Close, solid working and/or financial relationships

I. Form Alliances

Rationale for Alliance Candidate Selection:

- Companies with leading market share positions in manufacturing or wholesale distribution which might be difficult to acquire
- Future acquisition candidates once a relationship is established
- Smaller firms are minority investment candidates
- Companies that could benefit from greater professional services/SI capability
- Could expand EDS' functional applications and broaden delivery mode capability under an OEM or other type of reseller

I. Form Alliances (Cont.)

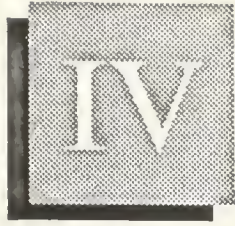
Alliance Candidates

Company	Application Function	Delivery Mode	Image	Discrete	Process	Distribution
1. Honeywell Indust. Automation and Control Division	Shop floor control 1-3 levels	Turnkey	High	X	X	
2. Allen-Bradley	Shop floor control 1-3 levels	Control turnkey	High	X	X	
3. Measurex	Shop floor control 1-3 levels	Turnkey	High	IBM controls	X SIC Paper, pulp, rubber, plastic, alum.	
4. Speech Plus Inc. Sunnyvale	Voice processing Shop floor	Turnkey	Medium to high	X	X	
5. Wang Laboratories moving toward open systems; vertical mkt expertise	Image processing	Turnkey, SI	Medium to high	X	X	X
6. Bolt, Beranek and Newman	Communications and process design	Turnkey, SI Application software	High	X	X	
7. Computer Associates/ Cullinet, DEC, IBM	Business planning, shop floor, control distribution	Application software, application development	Good	X	X	X
8. HP	Office systems New Wave plant floor area controllers	Applications development, application software, turnkey systems	Excellent	X	X	X
9. Bonner & Moore Consulting Services	Cross-industry maintenance application	Application software, professional services	Good	X	X	
10. Autodesk	3D CAD, expanding into manufacturing	Application software	Excellent	X		

I. Form Alliances (Cont.)

Alliance Candidates

Company	Application Function	Delivery Mode	Image	Discrete	Process	Distribution
11. Consilium	Plant Floor info. systems	Application software	Good to excellent	X	X	
12. Cincom	Enterprise architecture	Application	Good	X	X	X
13. Metier Managt. or Primavera	Project mgt.	Application software	Good	X	X	
14. Execucom Comshare	EIS	Application software, SI, software appl. tools	Good	X	X	X
15. System Software Associates	MRPII distribution shop floor	Application software, turnkey	Good	X	X	X
16. Neuron Data or Aion	Shop Floor CASE expert systems dev. tools	System software	Good		X	



Recommended Growth Plan to Achieve \$1 Billion in Revenue by 1995



IV. Recommended Growth Plan to Achieve \$1 Billion in Revenue by 1995

A. Characteristics of Adopting a Fundamental (Core) Growth Strategy

1. Represents the single primary essence (rationale) of your growth plan
2. May have minor adjustments, but is largely unchanged over 5 + years
3. Typically has a strong connection to your organization's culture and past
4. Becomes the new culture and future . . . fixed and inviolate

B. Characteristics of Implementing a Fundamental Growth Strategy

1. Seldom is there "one best way"—reality offers many combinations and permutations
2. Be flexible and open to change
3. Uncontrollable events play a key role —
4. Perspectives and priorities change over time (e.g. the attractiveness and availability of acquisition candidates can change rapidly)
5. Take it one step at a time and reevaluate plans at each milestone accomplishment

Bottom line: strategy is fixed, but implementation can take many forms

C. Recommended Fundamental (Core) EDS Growth Strategy

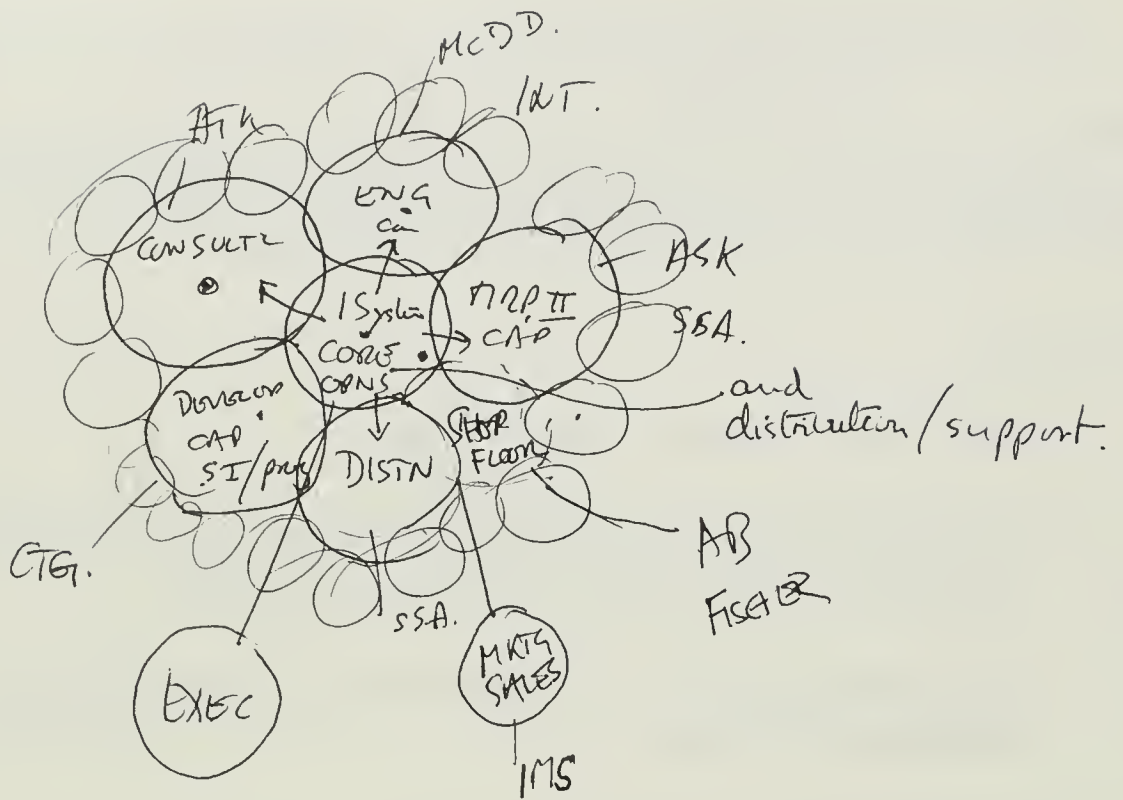
“Broaden ^{in targeted} products and services to become the logical sole source to customers for their information services and business process outsourcing needs across all business functions.”

Rationale:

1. Leverage customer relationships
2. Lead with traditional SI and SO services, then sell new offerings into the trust you have developed
3. Enlist key/national accounts to assist in developing prototype services
4. Maximize account penetration
5. “Own” (control) the customer
6. Lock out competition
7. Credible challenge for strengthening the sales organization

Bottom line: Become indispensable to a targeted subset of large and medium-sized firms rather than "just another vendor" to many firms

THEN
BUY CUSTOMER BASE.



D. Implementation Scenario—Acquisitions

1990 Revenue
Estimate

1. A.T. Kearney

\$100 Million +

Rationale:

- Premier business consultant to manufacturing/distribution industries
- Solves EDS “threats” of:
 - Inability to identify and inspire business change
 - Inability to articulate value in prospect terms
 - Lack of boardroom credibility
- Cornerstone contributor to follow on efforts
- Willingness to be acquired unknown
 - competitive position re AC

2. ASK

\$200 Million

Rationale:

- High quality, high profile vendor
- Opens door to large/medium-sized customer base, turnkey systems delivery mode, multivendor technology support
- Needs an EDS-like affiliation to further its growth

got problems
- comp
- resources.

D. Implementation Scenario—Acquisitions (Cont.)

1990 Revenue
Estimate

3. Mainstream Software

\$10 Million

Rationale:

example of small cos. in mfg

- Unique shop floor control software technology—critical for CIM
- Lock out the competition

4. McDonnell Douglas Systems Integration (MDSI)

Up to
\$300 Million

Rationale:

- CAD/CAM business opens door to engineering function and turnkey systems delivery mode
- Insurance software opens commercial claims processing for self-insured manufacturers and third party administrators (TPAs). Subsequent acquisition of a TPA could provide EDS an insurance claims business process offering . . .
- MDC may be willing to continue dealing off their IS companies (could include a long-term service contract)

D. Implementation Scenario—Acquisitions (Cont.)

	1990 Revenue Estimate
5. Cyborg Systems	\$13 Million

Rationale:

- Personnel software specialized for manufacturers
- Hard to find—most other HR software firms are generalists
- Lock out the competition

6. Paychex	\$115 Million
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Rationale:

- One of the largest payroll processors next to ADP
- Serves other industries as well—get support from other EDS divisions?!

D. Implementation Scenario—Acquisitions (Cont.)

INPUT recommends the next three companies for comprehensive penetration of the wholesale distribution market:

	1990 Revenue Estimate
7. Sterling Software/Ordernet Division	\$28 Million

Rationale:

- EDS becomes premier EDI software and network services provider
- Positions EDS to provide services linking manufacturers and distributors
- High growth potential

8. Logisticon	\$9 Million
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Rationale:

- Relatively pure play in wholesale distribution turnkey systems for materials handling and warehousing
- Lock out the competition

9. Imrex	\$15 Million
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Rational:

- Opens door to accounting and HR software products and professional services for distributors
- AS/400 platform orientation

E. Implementation Scenario—Alliances

1. Target an EDS OEM/reseller role and/or professional services/systems integrator role for alliance partners
2. For manufacturing, planning and financials, IBM AS/400 has become the standard; therefore target alliances with:

- *• ASK
- *• System Software Associates
 - J.D. Edwards
- *• Pansophic
 - American Software Corp.
- *• Marcam

3. For shop floor control, target alliances with HP and DEC and their partners.

Rationale: Maximize EDS's multivendor capability—which is a major IBM weakness

4. For engineering/design, focus on ties with HP, DEC, Sun
5. Other alliance opportunities described in Chapter III may be worth pursuing as well

*Also acquisition candidates

F. Implementation Scenario—Business Process Offerings

	Estimated 1995 Revenue Potential (\$ Millions)
Sales	
1. Turnkey product marketing services	100
2. Customer support services	100
Finance	
3. Product warranty and liability management	40
HR	
4. Computer end-user support	150
5. Commercial claims processing (tie to MDSI acquisition)	150
Engineering	
6. Publications/document management service	50
Production	
7. Manufacturing process modernization service (tie to multiple acquisitions)	300
Distribution	
None apparent	
Enterprise-wide	
8. Data center and network design and installation service (follow-on SO potential not measured here)	30
Total	<hr/> 920

G. Wildcards . . .

1. Acquire network field maintenance business as penetration point for eventual corporate network SO contracts. GEIS (\$200 million) and McDonnell Douglas (\$100 million) are available.
2. Partnership with HDS on UNIX-based systems for engineering and manufacturing, and SI solutions for manufacturing firms.

H. Putting It All Together

A. 1995 Estimated/Potential Revenue Magnitudes

	Revenue (\$ Millions)
1. Growth of current SI and SO business as usual (20% CAGR)	162
2. Acquisitions:	
• A.T. Kearney	200
• ASK	350
• Mainstream	20
• MDSI	600
• Cyborg	23
• Paychex	195
• Sterling Software/Ordernet	105
• Logisticon	18
• Imrex	30
Subtotal	1,541
3. Business Process Offerings	
• Product marketing services	100
• Customer support services	100
• Product warranty and liability management	40
• Computer end-user support	150
• Commercial claims processing	150
• Engineering document management	50
• Manufacturing process modernization	300
• Data center and network design and installation	30
Subtotal	920
Grand total	2,623

H. Putting It All Together (Cont.)

B. Implementation Scenario Timeline (Potential \$ Millions in 1995)

"Sooner is better than later . . ."		
<u>Acquisitions (\$)</u>		<u>Business Process Offerings (\$)</u> (start date)
ASK (350) A.T. Kearney (200) Mainstream (20)	1990	Computer end-user support (150)
MDSI (600) Ordernet (105) Logisticon (18) Imrex (30)	1991	Data center and network design and installation (30) Product marketing services (100) Customer support services (100)
Cyborg (23) Paychex (195)	1992	Commercial claims processing (150) (1) Manufacturing process modernization (300) (2) Product warranty and liability management (40) Engineering document management (50)
	1993	
	1994	
	1995	
Notes: (1) Dependent on MDSI acquisition (2) Dependent on multiple acquisitions		

I. Making It Happen

1. Both the challenge and the possibilities are enormous
2. Pacing the implementation is key—especially regarding:
 - Managing the acquisitions / alliances.
 - Developing sales and marketing in parallel with growth and new services
 - Ensuring adequate infrastructure to support the growth and control
3. Next steps for EDS . . .

1. EXPLORE EXISTING BASE
- what will they spend on function / equip.
2. TARGET BIG SECTIONS. IT - USE CAPITAL
- SYS. OPS - BUY COS. OPS.
- ENG - INTEGRATE \$1B - \$200M.
- PERP. - ASH \$200M - MEDIUM
DISTD.
3. GET CREDIBILITY BY CONSULTING COS.
4. PLAN FOR FRAGMENTED OPS. OTHERWISE
5. BUT . . . WORK TO ENTERPRISE MODEL
6. LOOK AT COMPETITION.
- AC - DIGITAL - IBM.
- CCL.
7. ESTABLISH ALLIANCE MGMT.
8. "Market" now as if you are \$1B vendor - at least \$100M.
tell prospects your strategy - test it.

About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

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Formed as a privately held corporation in 1974, INPUT has become a leading international research and consulting firm. Clients include more than 100 of the world's largest and most technically advanced companies.

INPUT OFFICES

North America

San Francisco Bay Area

1280 Villa Street
Mountain View, CA 94041-1194
(415) 961-3300
Fax (415) 961-3966

New York

959 Route 46 East, Suite 201
Parsippany, NJ 07054
(201) 299-6999 Fax (201) 263-8341

Washington, D.C.

1953 Gallows Road, Suite 560
Vienna, VA 22182
(703) 847-6870 Fax (703) 847-6872

International

London

Piccadilly House
33/37 Regent Street
London SW1Y 4NF, England
(071) 493-9335 Fax (071) 629-0179

Paris

52, boulevard de Sébastopol
75003 Paris, France
(33-1) 42 77 42 77 Fax (33-1) 42 77 85 82

Tokyo

Saida Building, 4-6, Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101, Japan
(03) 864-0531 Fax (03) 864-4114

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